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10/565,770	09/20/2006	Frank Loeker	5003073.071US1	2986

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EXAMINER	
DOLLINGER, MICHAEL M	
ART UNIT	PAPER NUMBER
1796	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/565,770	LOEKER ET AL.	
	Examiner	Art Unit	
	MIKE DOLLINGER	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04/27/2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11,18-20,23,24,26 and 27* is/are pending in the application.

4a) Of the above claim(s) *7* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,8-11,18-20,23,24,26 and 27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *04/27/2009 and 04/27/2009*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-6, 8-11, 18-20, 23, 24, 26 and 27 are rejected under 35 U.S.C. 102(e) as being anticipated by Smith et al (US 7,173,086 B2)

2. The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

3. Smith discloses superabsorbent polymer compositions comprising a superabsorbent polymer consisting essentially of a) from about 55 to about 99.9 wt% of polymerizable unsaturated acid group containing monomers, b) 0.001 to about 0.001 to about 5.0% by weight of internal crosslinking agents, c) 0.001 to about 5.0% by weight of surface crosslinking agent, g) from about 0.01 to about 5% by weight of an insoluble inorganic powder and h) from about 0.01 to 0.5% by weight of a thermoplastic polymer

[claim 1]. In the examples, Smith discloses superabsorbent polymer particles having a particle size of 150-850 microns [column 15 lines 45-49] that are prepared from a) acrylic acid [column 15 line 26] and c) an alkylene carbonate surface crosslinking agent [column 5 lines 27-34]. The inorganic particle g) is a fumed silica (AEROSIL 200) [column 15 lines 60-62] included in an amount of 0.4 % by weight [Table 2]. The thermoplastic polymer h) is preferably a polyester adhesive [Table 2 Examples 7-10] included in an amount of 0.15 or 0.3 % by weight [Table 2 Examples 7-10]. The polymers according to Smith can be employed in many products including sanitary towels, diapers or in wound coverings [column 9 lines 26-30] which read on a composite and a chemical product comprising the polymer particles. The inorganic particles g) preferably have a particle size of 100µm or less [column 6 lines 57-59].

4. Regarding the limitations toward inherent properties in claims 1-4 and 11, all the compositional and structural limitations of the powdery water absorbing polymer and each of its components are disclosed in Smith. Henceforth, all the claimed inherent properties of the materials must be present in the disclosed compositions and components. These properties are held to be inherently disclosed by Smith.

5. Claims 1-6, 8-11, 18-20, 23, 24, 26 and 27 are rejected under 35 U.S.C. 102(e) as being anticipated by Smith et al (US 7,173,086 B2) with further evidence provided by Chem Crete.

6. Smith does not disclose the particle size of AEROSIL 200 which is the fumed silica used as the inorganic particle g) in the inventive examples, discussed above.

7. Chem Crete disclose sthat AEROSIL 200 has an average particle size of 12 nanometers [page 1].

8. Regarding the limitations toward inherent properties in claims 1-4 and 11, all the compositional and structural limitations of the powdery water absorbing polymer and each of its components are disclosed in Smith. Henceforth, all the claimed inherent properties of the materials must be present in the disclosed compositions and components. These properties are held to be inherently disclosed by Smith.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 1-6, 8-11, 18-20, 23, 24, 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mukaida et al (EP 0 612 533 A1 or US 5,672,419) in view of Sun et al (US 6,124,391). All references to Mukaida et al refer to EP 0 612 533 A1.

10. Mukaida et al disclose a water absorbent composition comprising (A) 100 parts by weight of water absorbing polymer particles [abstract], (B) 0.5 to 30 part of a resin of a resin powder having heat adhesion property [abstract], and 10 weight % or less of an organic or inorganic powder [6:44-49]. The size of the water absorbing polymer particles (A) is 0.1mm to 0.9mm [3:53-55] and the polymer may be a crosslinked or self-crosslinked polyacrylic acid salt [3:34]. The water absorbing polymer whose surface is further cross linked by crosslinkers (secondary crosslinking) may be used [3:44-46]. The resin powder (B) may be a polyester type resin as well as other condensation type polymers [4:3-7]. Mukaida et al also disclose the above composition adhered to a fibrous material [abstract] such as cellulose-type fibers and organic synthetic type fibers [4:48-49] which reads on a composite comprising a powder water absorbing polymer. The water absorbing material is useful for water absorptive goods such as disposable diapers and sanitary napkins [abstract] which read on a chemical product.

11. Mukaida et al do not disclose the particle size of the organic or inorganic powders added to the composition. Mukaida et al do disclose preferable inorganic powders as zeolite, silica, alumina, bentonite and activated carbon, etc. [6:45-46].

12. Sun et al disclose a mixture of superabsorbent polymer (SAP) particles and inorganic powder [4:47-48]. The SAP particles are polymerized from acrylic acid or methacrylic acid salts [5:3-10]. The fine inorganic powder may comprise any of the claims including hydrated aluminum silicates [7:10-12]. The average size of the particles of the inorganic powder is preferably less than about 5 μm [7:17-18]. Sun et al

teach that the admixture of these inorganic fine particles provides anti-caking characteristics to the SAP particles [1:7-11].

13. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have prepared a powdery water absorbing polymer from a fine particle with a particle size of less than 200μm, an adhesive thermoplastic and a water absorbing polymer particle because Mukaida et al teach that it is within the skill of the art to prepare a powdery water absorbing polymer from a fine particle, an adhesive thermoplastic and a water absorbing polymer particle and Sun et al teach that it is within the skill of the art to admix an SAP particle with a inorganic fine particle with an average particle size of 5μm or less. One would have been motivated to use the inorganic fine particle of Sun et al in the composition of Mukaida et al to receive the expected benefit of anti-caking characteristics. Absent any evidence to the contrary, there would have been a reasonable expectation of success in using an inorganic fine powder with an average particle size of less than 200μm as the inorganic powder of Mukaida et al.

14. Regarding claim 10, Mukaida et al also do not disclose particular crosslinking agents suitable for the surface crosslinking reaction.

15. Sun et al, discussed above, disclose SAP particles with the same polymer composition as Mukaida et al and also disclose suitable surface crosslinking agents including organic compounds such as a diol, a diamine, a diepoxide or an alkylene carbonate [6:21-25].

16. Selection of a known material based on its suitability for its intended use is *prima facie* obvious, see *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65

USPQ 297 (1945). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used an organic compound as a surface crosslinking agent with a polyacrylic acid water absorbing polymer particle composition because Mukaida et al teach that it is within the skill of the art to surface crosslink a polyacrylic acid water absorbing polymer particle with a crosslinking agents and Sun et al teach that it is within the ordinary skill of the art to utilize a diol, a diamine, a diepoxide or an alkylene carbonate as a surface crosslinking agent for SAP particles prepared from a polyacrylic acid. Absent any evidence to the contrary, there would have been a reasonable expectation of success in utilizing an organic surface crosslinking agent for the water absorbing polymer particles for Mukaida et al.

17. Regarding the limitations toward inherent properties in claims 1-4 and 11, all the compositional and structural limitations of the powdery water absorbing polymer and each of its components are disclosed in Mukaida et al in view of Sun et al. Henceforth, all the claimed inherent properties of the materials must be present in the disclosed compositions and components. These properties are held to be inherently disclosed by Mukaida et al in view of Sun et al.

18. Claims 1-5, 8-11, 18, 19, 23, 24, 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ball (WO 91/18042 A1) in view of Sun et al (US 6,124,391).

19. Ball discloses a water absorbent resin particle comprising a carboxyl containing water absorbent resin rendered adhesive by the incorporation of a thermoplastic polymer with a hydrophilic character, and optionally a flow control additive [abstract].

The water absorbent resin is preferably an alkali metal acrylate type polymer [7:31-32] with a particle size preferably 0.5 mm or greater [17:30-32]. The adhesive thermoplastic polymer is preferably used in 20 parts by weight or less and more preferably 10 parts by weight or less per 100 pars by weight of water absorbent resin [13:9-17]. The adhesive thermoplastic polymer is preferably polyethylene oxide based material [11:19-22]. The flow control additive may be an inorganic material including silica powders and the like [12:2-3] and is included in an amount 0.25 to 1 part by weight per 100 parts by weight of water absorbent resin [14:1-11]. The flow control additive functions to maintain the flowability of the composition [11:29-31]. The water absorbing resin may be crosslinked on the surface by a polyhydroxy compound [8:25-30] including organic polyhydroxy compounds such as ethylene glycol [8:32]. Ball also discloses articles comprises the composition bound to a mass of woven or nonwoven fibers [abstract] which reads on a composite and a chemical product.

20. Ball does not disclose the particle size of the inorganic powders added to the composition as a flow control additive. Ball does teach, however that inorganic material includes silica powders and the like [12:2-3] and functions to maintain the flowability of the composition [11:29-31].

21. Sun et al disclose a mixture of superabsorbent polymer (SAP) particles and inorganic powder [4:47-48]. The SAP particles are polymerized from acrylic acid or methacrylic acid salts [5:3-10]. The fine inorganic powder may comprise any of the clays including hydrated aluminum silicates [7:10-12]. The average size of the particles of the inorganic powder is preferably less than about 5 μm [7:17-18]. Sun et al teach

that the admixture of these inorganic fine particles provides anti-caking characteristics to the SAP particles [1:7-11]. Anti-caking characteristics read on maintaining flowability.

22. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have prepared a powdery water absorbing polymer from a fine particle with a particle size of less than 200μm, an adhesive thermoplastic and a water absorbing polymer particle because Ball teaches that it is within the skill of the art to prepare a powdery water absorbing polymer from a fine inorganic powder, an adhesive thermoplastic and a water absorbing polymer particle and Sun et al teach that it is within the skill of the art to admix an SAP particle with a inorganic fine particle with an average particle size of 5μm or less. One would have been motivated to use the inorganic fine particle of Sun et al in the composition of Ball to receive the expected benefit of anti-caking characteristics. Absent any evidence to the contrary, there would have been a reasonable expectation of success in using an inorganic fine powder with an average particle size of less than 200μm as the flow control additive of Ball.

23. Regarding the limitations toward inherent properties in claims 1-4 and 11, all the compositional and structural limitations of the powdery water absorbing polymer and each of its components are disclosed in Ball in view of Sun et al. Henceforth, all the claimed inherent properties of the materials must be present in the disclosed compositions and components. These properties are held to be inherently disclosed by Ball in view of Sun et al.

24. Claims 1-6, 8, 11, 18-20, 23, 24, 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eisfeld et al (DE 100 26 861 A1) in view of Sun et al (US 6,124,391). All references to Eisfeld et al refer to the attached machine translation.

25. Eisfeld et al disclose a superabsorber group comprising at least one superabsorber particle and at least one thermoplastic adhesive connected with the superabsorber particle [page 1 paragraph 1]. The superabsorbers are preferably polyacrylates [page 2 paragraph 11] and have a particle size of approximately 30 to 500µm [page 2 paragraph 14]. The adhesive is present in an amount from 1 to 15, preferably 5 to 10 weight % of the superabsorber group [page 5 paragraph 4]. The adhesive includes at least 10 weight % of polymers selected from a group of polymers including polyester as well as other condensation polymers [page 3 paragraph 6]. Eisfeld et al also disclose medical articles or hygienic articles formed from the superabsorber group and prepared using a fiber matrix group [page 1 paragraph 1] which reads on a composite as well as a chemical product.

26. Eisfeld et al do not disclose the claimed 0.01 to about 20 percent by weight of a fine particle with a particle size of less than about 200µm.

27. Sun et al disclose a mixture of superabsorbent polymer (SAP) particles and inorganic powder [4:47-48]. The SAP particles are polymerized from acrylic acid or methacrylic acid salts [5:3-10]. The fine inorganic powder may comprise any of the clays including hydrated aluminum silicates [7:10-12]. The average size of the particles of the inorganic powder is preferably less than about 5 µm [7:17-18]. The amount of the fine inorganic particle is typically between 0.2% and about 10% by weight of the SAP

particles [7:25-32]. Sun et al teach that the admixture of these inorganic fine particles provides anti-caking characteristics to the SAP particles [1:7-11].

28. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have prepared a powdery water absorbing polymer from a fine particle with a particle size of less than 200μm, an adhesive thermoplastic and a water absorbing polymer particle because Eisfeld et al teaches that it is within the skill of the art to prepare a powdery water absorbing polymer from a fine inorganic powder, an adhesive thermoplastic and a water absorbing polymer particle and Sun et al teach that it is within the skill of the art to admix an SAP particle with a inorganic fine particle with an average particle size of 5μm or less. One would have been motivated to use the inorganic fine particle of Sun et al in the composition of Eisfeld et al to receive the expected benefit of anti-caking characteristics. Absent any evidence to the contrary, there would have been a reasonable expectation of success in using an inorganic fine powder with an average particle size of less than 200μm as the flow control additive of Eisfeld et al.

29. Regarding the limitations toward inherent properties in claims 1-4 and 11, all the compositional and structural limitations of the powdery water absorbing polymer and each of its components are disclosed in Eisfeld et al in view of Sun et al. Henceforth, all the claimed inherent properties of the materials must be present in the disclosed compositions and components. These properties are held to be inherently disclosed by Eisfeld et al in view of Sun et al.

30. Regarding claims 26 and 27, a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. Titanium Metals Corp. of America v. Banner, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985).

31. Claims 1-4, 8-11, 18-20, 23, 24, 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Engelhardt et al (US 5,840,321) in view of Sun et al (US 6,124,391).

32. Engelhardt discloses highly swellable hydrogels which are coated with nonreactive, water-insoluble waxes in a quantity of from about 0.05 to about 2% by weight, based on uncoated hydrogel [abstract]. The wax is preferably included in an amount from about 0.05 to about 1% by weight [column 4 lines 55-56]. The large majority of the hydrogel particles, up to 94.5%, are above 200 μm [Tables 1-3]. The hydrogel is preferably a polyacrylate or polymethacrylate [column 5 lines 61-63] which is preferably crosslinked [column 5 line 66 through column 6 line 3] and also surface crosslinked (secondary crosslinked) by various organic compounds acting as crosslinking agents [column 6 lines 16-30]. The hydrogel may be incorporated into sanitary articles including baby and adult nappies, sanitary towels, tampons and the like [column 7 lines 52-56] which read on a composite and a chemical product.

33. Engelhardt does not disclose the claimed 0.01 to about 20 percent by weight of a fine particle with a particle size of less than about 200μm. However, Engelhardt does disclose that an object of the invention is a hydrogel having a low caking tendency in damp air [column 3 lines 7-8].

34. Sun et al disclose a mixture of superabsorbent polymer (SAP) particles and inorganic powder [4:47-48]. The SAP particles are polymerized from acrylic acid or methacrylic acid salts [5:3-10]. The fine inorganic powder may comprise any of the clays including hydrated aluminum silicates [7:10-12]. The average size of the particles of the inorganic powder is preferably less than about 5 μm [7:17-18]. The amount of the fine inorganic particle is typically between 0.2% and about 10% by weight of the SAP particles [7:25-32]. Sun et al teach that the admixture of these inorganic fine particles provides anti-caking characteristics to the SAP particles [1:7-11].

35. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have prepared a powdery water absorbing polymer from a fine particle with a particle size of less than 200μm, an adhesive thermoplastic and a water absorbing polymer particle because Engelhardt teaches that it is within the skill of the art to prepare a powdery water absorbing polymer from an adhesive thermoplastic and a water absorbing polymer particle and Sun et al teach that it is within the skill of the art to admix an SAP particle with a inorganic fine particle with an average particle size of 5μm or less. One would have been motivated to use the inorganic fine particle of Sun et al in the composition of Engelhardt to receive the expected benefit of anti-caking characteristics. Absent any evidence to the contrary, there would have been a reasonable expectation of success in using an inorganic fine powder with an average particle size of less than 200μm in the composition of Engelhardt.

36. Regarding the limitations toward inherent properties in claims 1-4 and 11, all the compositional and structural limitations of the powdery water absorbing polymer and

each of its components are disclosed in Engelhardt in view of Sun et al. Henceforth, all the claimed inherent properties of the materials must be present in the disclosed compositions and components. These properties are held to be inherently disclosed by Engelhardt et al in view of Sun et al.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

37. Claims 1-6, 8-11, 18-20, 23, 24, 26 and 27 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 11 and 24 of U.S. Patent No. 7,173,086 B2. Although the conflicting claims are not identical, they are not patentably distinct from each other because they have substantially overlapping subject matter. The patent claims superabsorbent polymer

compositions comprising a superabsorbent polymer consisting essentially of a) from about 55 to about 99.9 wt% of polymerizable unsaturated acid group containing monomers, b) 0.001 to about 0.001 to about 5.0% by weight of internal crosslinking agents, c) 0.001 to about 5.0% by weight of surface crosslinking agent, g) from about 0.01 to about 5% by weight of an insoluble inorganic powder and h) from about 0.01 to 0.5% by weight of a thermoplastic polymer [claim 1].

38. The instant claims are obvious variants of the patent claims, as evidenced by the specification of the patent: In the examples, Smith discloses superabsorbent polymer particles having a particle size of 150-850 microns [column 15 lines 45-49] that are prepared from a) acrylic acid [column 15 line 26] and c) an alkylene carbonate surface crosslinking agent [column 5 lines 27-34]. The inorganic particle g) is a fumed silica (AEROSIL 200) [column 15 lines 60-62] included in an amount of 0.4 % by weight [Table 2]. The thermoplastic polymer h) is preferably a polyester adhesive [Table 2 Examples 7-10] included in an amount of 0.15 or 0.3 % by weight [Table 2 Examples 7-10]. The polymers according to Smith can be employed in many products including sanitary towels, diapers or in wound coverings [column 9 lines 26-30] which read on a composite and a chemical product comprising the polymer particles. The inorganic particles g) preferably have a particle size of 100μm or less [column 6 lines 57-59].

39. Regarding the limitations toward inherent properties in claims 1-4 and 11, all the compositional and structural limitations of the powdery water absorbing polymer and each of its components are disclosed in Smith. Henceforth, all the claimed inherent

properties of the materials must be present in the disclosed compositions and components. These properties are held to be inherently disclosed by Smith.

40. "[T]hose portions of the specification which provide support for the patent claims may also be examined and considered when addressing the issue of whether a claim in the application defines an obvious variation of an invention claimed in the patent." In re Vogel, 422 F.2d 438, 441-42, 164 USPQ 619, 622 (CCPA 1970).

Priority

41. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Response to Arguments and Affadavits

42. Applicant's arguments filed 04/22/2009 have been fully considered but they are not persuasive.

43. With regard to Mukaida et al (EP 0 612 533 A1 or US 5,672,419) in view of Sun et al (US 6,124,391), Applicants argue that Mukaida use the resin powder (which corresponds to the claimed thermoplastic adhesive) in an amount that would result in the SAP particles sticking together into a large mass, which cannot be processed, and, hence, the present invention would be inoperable. This argument is not convincing. Mukaida claims as low as 0.5 parts per weight of a resin powder per 100 parts by weight of SAP particles. There disclosed lower limit of 0.5 parts per weight is well below the claimed upper limit 1% by weight of thermoplastic adhesive. The Smith and

McIntosh affadavits only allege that compositions with greater than 1% by weight of thermoplastic adhesive make the present invention inoperable. Why would one of ordinary skill in the art not use the extreme lower end of the amount of resin powder (thermoplastic adhesive) disclosed in Mukaida and arrive at an operable embodiment of the present invention.

44. Applicants also argue that Sun discloses adding inorganic particle to SAP particles to maintain free flowing properties of the SAP particle but that Sun does not disclose adding an adhesive in order to adhere the inorganic particles to the SAP particles. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The claimed thermoplastic adhesive is taught by Mukaida and does not need to be present in the disclosure of Sun.

45. With regard to Ball (WO 91/18042 A1) in view of Sun et al (US 6,124,391), Applicants argue that Ball discloses thermoplastic adhesives in an amount that in the present invention would result in the SAP particles sticking together into a large mass, which cannot be processed, and, hence, the present invention would be inoperable. This argument is not convincing. Ball discloses compositions with as little as 1 part by weight of thermoplastic adhesive per 100 parts of water absorbent resin (SAP particles) [page 13 lines 9-10]. Considering that additional components (inorganic powder, flow control additive, etc.) will be added to the composition, the lower limit of 1 part per

weight is slightly below the claimed upper limit 1% by weight of thermoplastic adhesive of the water-absorbing polymer composition. The Smith and McIntosh affadavits only allege that compositions with greater than 1% by weight of thermoplastic adhesive make the present invention inoperable. Why would one of ordinary skill in the art not use the extreme lower end of the amount of thermoplastic adhesive disclosed in Ball and arrive at an operable embodiment of the present invention?

46. With regard to Eisfeld et al (DE 100 26 861 A1) in view of Sun et al (US 6,124,391), Applicants argue that Eisfeld discloses thermoplastic adhesives in an amount that in the present invention would result in the SAP particles sticking together into a large mass, which cannot be processed, and, hence, the present invention would be inoperable. Examiner refers Applicants to the discussion of the affadavits, below.

47. With regard to the Smith affidavit, Dr. Smith argues alleges that the claims use smaller amount of thermoplastic adhesives than the prior art. Dr. Smith also alleges that using the small amount of thermoplastic adhesive as set forth in the current claims would make the bonding of SAP particles to fibers inoperable. This assertion that the prior art is inoperable as disclosed is not convincing. Dr. Smith has essentially submitted arguments to assert the inoperability of the prior art of record. Examiner refers Applicants to the following case law. The prior art is presumed to be operable and enabling; when the reference relied on expressly anticipates or makes obvious all of the elements of the claimed invention, the reference is presumed to be operable. Once such a reference is found, the burden is on applicant to provide facts rebutting the presumption of operability. *In re Sasse*, 629 F.2d 675, 207 USPQ 107 (CCPA 1980).

Since every patent is presumed valid (35 U.S.C. 282), and since that presumption includes the presumption of operability (*Metropolitan Eng. Co. v. Coe*, 78 F.2d 199, 25 USPQ 216 (D.C.Cir. 1935), examiners should not express any opinion on the operability of a patent. **Affidavits or declarations attacking the operability of a patent cited as a reference must rebut the presumption of operability by a preponderance of the evidence.** *In re Sasse*, 629 F.2d 675, 207 USPQ 107 (CCPA 1980). Further, since in a patent it is presumed that a process if used by one skilled in the art will produce the product or result described therein, such presumption is **not overcome by a mere showing that it is possible to operate within the disclosure without obtaining the alleged product.** *In re Weber*, 405 F.2d 1403, 160 USPQ 549 (CCPA 1969). It is to be presumed also that skilled workers would as a matter of course, if they do not immediately obtain desired results, make certain experiments and adaptations, within the skill of the competent worker. The failures of experimenters who have no interest in succeeding should not be accorded great weight. *In re Michalek*, 162 F.2d 229, 74 USPQ 107 (CCPA 1947); *In re Reid*, 179 F.2d 998, 84 USPQ 478 (CCPA 1950). **Where the affidavit or declaration presented asserts inoperability in features of the reference which are not relied upon, the reference is still effective as to other features which are operative**. *In re Shepherd*, 172 F.2d 560, 80 USPQ 495 (CCPA 1949). **Where the affidavit or declaration presented asserts that the reference relied upon is inoperative, the claims represented by applicant must distinguish from the alleged inoperative reference disclosure**. *In re Crosby*, 157 F.2d 198, 71 USPQ 73 (CCPA 1946). See also In re Epstein, 32 F.3d 1559, 31 USPQ2d 1817

(Fed. Cir. 1994). If a patent teaches or suggests the claimed invention, an affidavit or declaration by patentee that he or she did not intend the disclosed invention to be used as claimed by applicant is immaterial. *In re Pio*, 217 F.2d 956, 104 USPQ 177 (CCPA 1954). Compare *In re Yale*, 434 F.2d 66, 168 USPQ 46 (CCPA 1970). See MPEP § 716.07 and 2121 [R-6] I.

48. With regard to the McIntosh affidavit, Dr. McIntosh states that experiments have shown that superabsorbent particles coated with 1% of maleated polypropylene stick together in a mass, not particles and cannot flow through the reactor as particles. Dr. McIntosh also states that superabsorbent particles coated with 1% polyester cannot be processed through a paddle dryer due to the tack of the thermoplastic coating on the particles (it is unclear whether experiments were performed on SAP particles with 1% polyester or if this is merely an assertion). There are several issues with this affidavit:

a. Merely stating that experiments were performed and the alleged results is not convincing evidence of any conclusion. The experiments must be described in detail. To determine that experiments were performed correctly and that Applicants conclusions are correct, Examiner must know the composition, preparation method and relevant physical properties of each component (SAP particles, thermoplastic adhesives, etc.), the complete processes performed (equipment used, reaction temperatures, amounts of components, etc.), the testing methods (of flow, tackiness, etc), and the actual quantitative results (flow value, dust portion, etc.). The presentation of the McIntosh affidavit amounts to no more than arguments.

b. It is unclear what, exactly, Applicants are trying to show with the McIntosh affidavit. Is the prior art inoperable as the presently claimed invention? If so, Applicants are referred to the discussion in paragraph 47 above. Are there unexpected results with the claimed invention? If so, Applicant is reminded that a showing of unexpected results must meet three criteria: 1) the experiments and data must compare the prior art to the claimed invention, 2) the results must be commensurate in scope with the claims and 3) the results must be, in fact, unexpected. Furthermore, it is unclear which prior art reference or rejection this affidavit intends to address. Any affidavit must clearly state which rejection(s) Applicants intend to overcome and how, followed by convincing evidence and explanation.

c. It is unclear how the experiments relate to the claimed invention, considering that the required components of fine particle apparently not included in the experimental compositions. Any experimental compositions must be within the scope of the invention or used as comparative examples. It must be stated clearly stated how the experimental compositions relate to the claimed invention.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MIKE DOLLINGER whose telephone number is (571)270-5464. The examiner can normally be reached on M-F 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/mmd/

/Randy Gulakowski/
Supervisory Patent Examiner, Art Unit 1796